

CLAIMS

What is claimed is:

1. A method of reducing viremia in an individual infected with hepatitis B virus (HBV), comprising administering a composition comprising a polynucleotide comprising an immunostimulatory sequence (ISS) to said individual, wherein the ISS comprises the sequence 5'-C, G-3', wherein an HBV antigen is not administered in conjunction with administration of said composition, and wherein said composition is administered in an amount sufficient to reduce HBV viremia.
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- 10 2. The method of claim 1, wherein the ISS comprises the sequence 5'-T, C, G-3'.
- 15 3. The method of claim 1, wherein the ISS comprises the sequence 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, G-3' or 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, C-3'.
4. The method of claim 3, wherein the ISS comprises a sequence selected from the group consisting of 5'-AACGTTCC-3', 5'-AACGTTCG-3', 5'-GACGTTCC-3' and 5'-GACGTTCG-3'.
- 20 5. The method of claim 1, wherein the ISS comprises the sequence 5'-TGACTGTGAACGTTCGAGATGA-3' (SEQ ID NO:1).
6. The method of claim 1, wherein the individual is a mammal.
7. The method of claim 1, wherein administration is intravenous or subcutaneous.
8. A method of reducing blood levels of a hepatitis virus antigen in an individual infected with hepatitis B virus (HBV), comprising administering a

composition comprising a polynucleotide comprising an immunostimulatory sequence (ISS) to said individual, wherein the ISS comprises the sequence 5'-C, G-3', wherein an HBV antigen is not administered in conjunction with administration of said composition, and wherein said composition is administered in an amount sufficient to reduce blood levels of a hepatitis virus antigen.

5 9. The method of claim 8, wherein the ISS comprises the sequence 5'-T, C, G-3'.

10 10. The method of claim 8, wherein the ISS comprises the sequence 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, G-3' or 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, C-3'.

11. The method of claim 10, wherein the ISS comprises a sequence selected from the group consisting of 5'-AACGTTCC-3', 5'-AACGTTCG-3', 5'-GACGTTCC-3' and 5'-GACGTTCG-3'.

15 12. The method of claim 8, wherein the ISS comprises the sequence 5'-TGACTGTGAACGTTCGAGATGA-3' (SEQ ID NO:1).

13. The method of claim 8, wherein the individual is a mammal.

14. The method of claim 8, wherein administration is intravenous or subcutaneous.

15. The method of claim 8, wherein the hepatitis virus antigen is HBsAg.

20 16. A kit for reducing viremia in an individual infected with or exposed to HBV, comprising a composition comprising a polynucleotide comprising an immunostimulatory sequence (ISS), wherein the ISS comprises the sequence 5'-C, G-3', wherein said kit does not comprise an HBV antigen; and wherein the kit

comprises instructions for administration of said composition to an individual infected with or exposed to HBV to reduce viremia.

17. The kit of claim 16, wherein the ISS comprises the sequence 5'-T, C, G-3'.

5 18. The kit of claim 16, wherein the ISS comprises the sequence 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, G-3' or 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, C-3'.

19. The kit of claim 18, wherein the ISS comprises the sequence 5'-AACGTTCG-3'.

10 20. The kit of claim 16, wherein the ISS comprises the sequence 5'-TGACTGTGAACGTTCGAGATGA-3' (SEQ ID NO:1).